

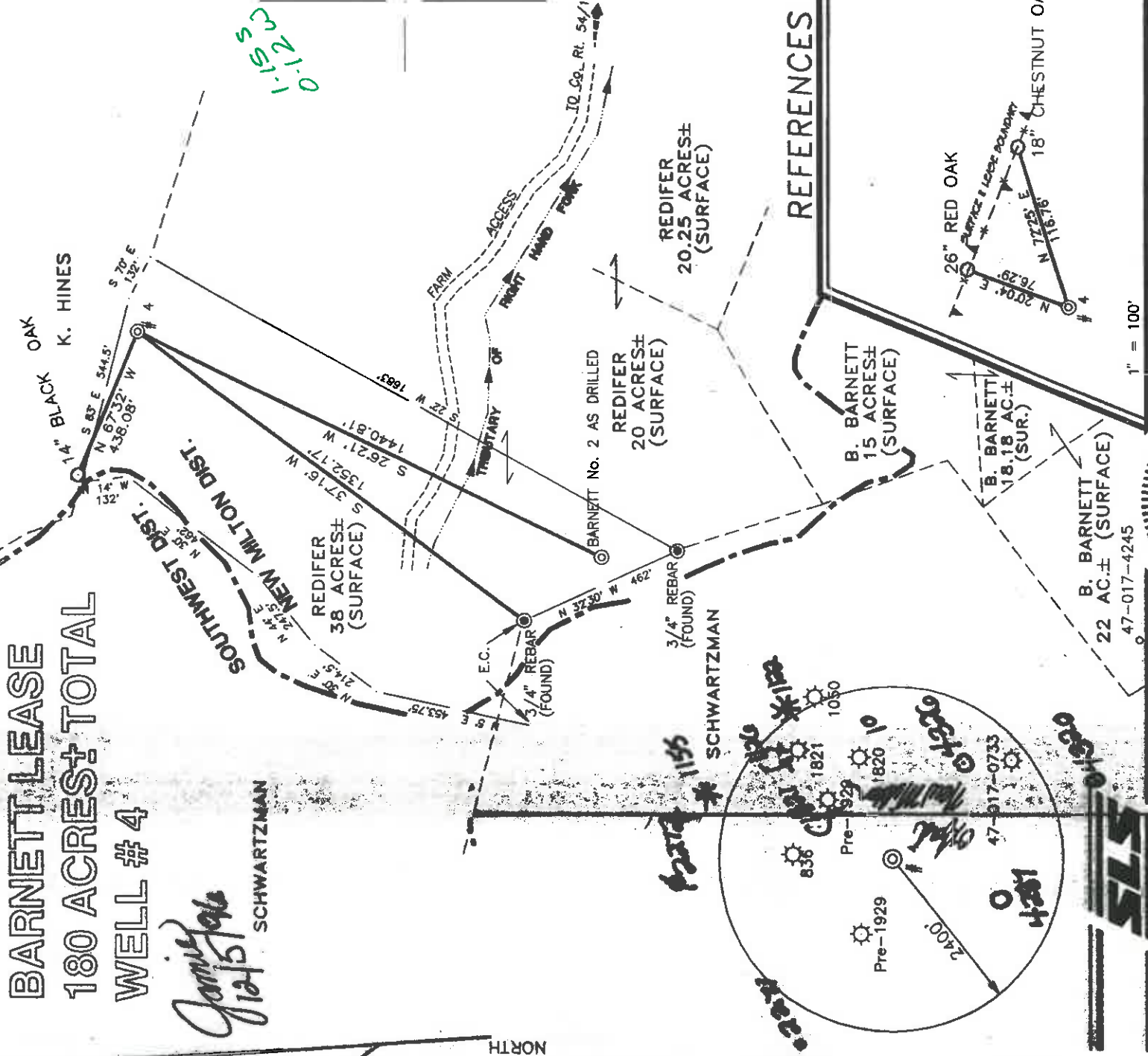
LATITUDE 39°12'30"

LONGITUDE 80°45'00"

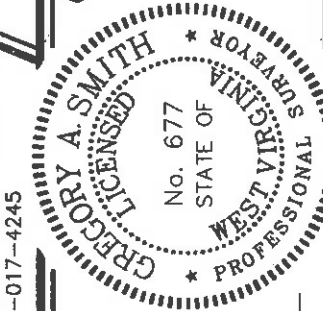
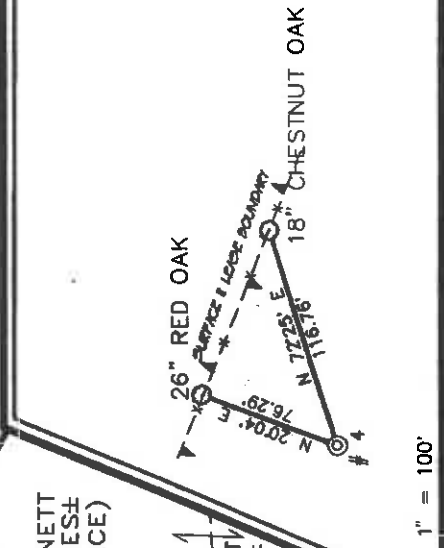
# BARNETT LEASE 180 ACRES ± TOTAL WELL #4

*Jamie Hoke*  
SWARTZMAN

0-1-1-5-2-0



## REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

P.S. 677  
*Gregory A. Smith*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
DATE NOVEMBER 11, 19 96  
OPERATORS WELL NO. BARNETT # 4  
API WELL NO. \_\_\_\_\_

STATE 47 COUNTY 017 PERMIT 04327

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
OIL AND GAS DIVISION

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 3350P4 (58-60)  
PROVEN SOURCE OF ELEVATION JUNCTION OF ROADS ELEVATION 966' SCALE 1" = 400'

WELL TYPE : OIL  GAS  INJECTION  WASTE  DISPOSAL  "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION : ELEVATION 1279' WATERSHED RIGHT HAND FORK OF LITTLE TOMS FORK

DISTRICT NEW MILTON COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'

SURFACE OWNER GREGORY B. REDIFER (LOT 5) ACREAGE 38 OF 92

ROYALTY OWNER VADA BARNETT ET.AL. LEASE ACREAGE 180 LEASE NO. \_\_\_\_\_

PROPOSED WORK :  
DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER \_\_\_\_\_  
PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION ALEXANDER  
ESTIMATED DEPTH 5600'

WELL OPERATOR KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN  
ADDRESS 22 GARTON PLAZA WESTON, WV 26452 ADDRESS 22 GARTON PLAZA WESTON, WV 26452

6-6-154

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: REDIFER, GREGORY R.

LOCATION: Elevation: 1,279.00

District: NEW MILTON  
Latitude: 6010 Feet South of 39 Deg. 12 Min. 30 Sec.  
Longitude: 680 Feet West of 80 Deg. 45 Min. 0 Sec.

Operator Well No.: BARNETT #24

Quadrangle: OXFORD

County: DODDRIDGE  
Offices of Oil & Gas Permitting

Company: KEY OIL COMPANY  
22 Garton Plaza  
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD  
Permit Issued: 12/13/96  
Well Work Commenced: 12/26/96  
Well Work Completed: 1/9/97

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth ( feet ) 5575'  
Fresh water depths ( ft ) None  
Salt water depths ( ft ) 404'

Is coal being mined in area ( Y / N )? N  
Coal Depths ( ft ): None Reported

OPEN FLOW DATA  
Warren  
Speechley  
Balltown  
Rileys  
Benson

Producing formation Alexander, Elk  
Gas: Initial open flow 21 MCF / d  
Final open flow 1,540 MCF / d  
Time of open flow between initial and final tests N/A

Static rock pressure 1550 psig ( surface pressure ) after 96 Hours

Second producing formation Commingled  
Gas: Initial open flow \_\_\_\_\_ MCF / d  
Final open flow \_\_\_\_\_ MCF / d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock pressure \_\_\_\_\_ psig ( surface pressure ) after \_\_\_\_\_ Hours  
Pay zone depth ( ft ) \_\_\_\_\_  
Oil: Initial open flow \_\_\_\_\_ Bbl / d  
Oil: Final open flow \_\_\_\_\_ Bbl / d

3410' - 3466'  
3476' - 3706'  
3730' - 4506'  
4582' - 4995'  
5061' - 5072'  
5188' - 5413'

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"	128.1	128.1	70 sks To Surface
8 5/8"	2161.85	2161.85	630 sks To Surface
4 1/2"	5502	5502	460 sks
2 3/8"		5332	

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: KEY OIL COMPANY

By:   
Date: 4-22-97

PRESIDENT/ 2nd 1997

Hudak #1 (47-017-04319)  
Four Stage Foam Frac - Halliburton

1st Stage:	Alexander ( 11 holes ) ( 5135.5' - 5184.5' )	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 810 bbls foam.
2nd Stage:	Benson ( 10 holes ) ( 4837.5' - 4846' )	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 615 bbls foam.
3rd Stage:	Riley ( 6 holes ) ( 4416' - 4417.25' ) Baltown ( 4 holes ) ( 3976.75' - 3977.5' )	60 Quality Foam. 1000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 436,000 SCF N2, 645 bbls foam.
4th Stage:	Speechley ( 10 holes ) ( 3264' - 3351' ) Warren ( 2 holes ) ( 3234.25' - 3234.5' )	60 Quality Foam, 750 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 390,000 SCF N2, 589 bbls foam.

WELL LOG

Mud	0	18	
Sand & Shale	18	150	
Red Rock	150	158	
Sand & Shale & Red Rock	158	215	
Sand	215	249	
Sand & Red Rock & Shale	249	626	
Lime	626	643	
Red Rock & Shale & Sand	643	834	
Lime	834	842	
Sand & Shale & Red Rock	842	1330	
White Sand	1330	1417	
Sand & Shale	1417	1579	
Sand	1579	1735	
Sand & Shale	1735	1825	
Little Lime	1825	1849	
Big Lime	1849	1928	
Big Injun	1928	2010	
Shale	2010	2140	
Weir	2140	2244	
Shale	2244	2344	
Berea	2344	2354	
Sand & Shale	2354	2549	
Gordon	2549	2578	
Shale	2578	3190	
Warren	3190	3246	
Shale	3246	3258	
Speechley	3258	3482	
Shale	3482	3512	
Baltown	3512	4300	
Shale	4300	4364	
Riley	4364	4448	
Shale	4448	4716	
3rd Riley	4716	4774	
Shale	4774	4840	
Benson	4840	4853	
Shale	4853	5088	
Alexander	5088	5211	
Shale	5211	5495	
T.D.	5495		

Damp @ 662'

1/2" H<sup>2</sup>O @ 1729'

Gas Checks

2501	No Show
3027	6/10ths 1" w/H <sup>2</sup> O
3463	10/10ths 1" w/H <sup>2</sup> O
4017	20/10ths 2" w/H <sup>2</sup> O
4511	18/10ths 2" w/H <sup>2</sup> O
4913	20/10ths 2" w/H <sup>2</sup> O
TD	2/10ths 2" w/H <sup>2</sup> O
	Collars 2/10ths 2" w/H <sup>2</sup> O

APR Well No. 47-017-04327 GINIA

**DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**

**WELL WORK PERMIT APPLICATION**

1) Well Operator: KEY OIL COMPANY 25658 6 526

2) Operator's Well Number: BARNETT #4 3) Elevation: 1279'

Well type: (a) Oil X / or Gas X / Drilled 12/13/96

(b) If Gas: Production X / Underground Storage    / Exposed 12/13/98  
Deep    / Shallow X /

Proposed Target Formation(s): ALEXANDER 439

Proposed Total Depth: 5600 feet

7) Approximate fresh water strata depths: 100'

8) Approximate salt water depths: 1612'

9) Approximate coal seam depths: N/A

10) Does land contain coal seams tributary to active mine? Yes    / No X /

11) Proposed Well Work: DRILL, STIMULATE, PRODUCE [Signature]

12)   

**CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS	FOOTAGE INTERVALS	CEMENT		
	Size	Grade	Weight per ft. drilling	Left in well	Fill-up (cu. ft.)
Conductor					<u>30598.13</u>
Fresh Water	11 3/4	ERW	42	132	70 SKS. TO SURFACE
Coal					<u>30598.13</u>
Intermediate	8 5/8	ERW	23	1780	520 SKS. TO SURFACE
Production	4 1/2	J-55	10.5	5500	450 SKS.
Tubing	1.5				<u>30598.11</u>
Liners					

PACKERS : Kind   

Sizes   

Depths set   

For Office of Oil and Gas Use Only

Fee(s) paid:    Well Work Permit    Reclamation    RECEIVED WPC2 Agent  
 Plat    WW-9    WW-2B    Bond    Blanket    Environmental Protection  
 (Type)    LUC 02 1896

Permitting  
Office of Oil & Gas

1) Date: NOVEMBER 27, 1996  
2) Operator's well number BARNETT #4  
3) API Well No: 47 - 017 - 4327  
State            County            Permit           

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served: 5) (a) Coal Operator:  
(a) Name GREGORY B. REDIFER Name NONE  
Address RT. 1 BOX 87 Address             
NEW MILTON, WV 26411  
(b) Name            (b) Coal Owner(s) with Declaration  
Address            Name             
Address            Address             
(c) Name            Name             
Address            Address             
6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration  
Address RT. 2 BOX 135 Name             
SALEM, WV 26426 Address             
Telephone (304)- 782-1043

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
 Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through      on the above named parties, by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

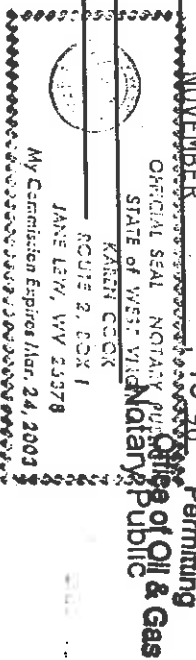
I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Walt Operator            KEY OIL COMPANY  
By:             
Its:            PRESIDENT  
Address 22 GARTON PLAZA  
WESTON, WV 26452 Telephone 304-269-7102

Subscribed and sworn before me this 27TH day of NOVEMBER 1996 Permitting  
           Office of Oil & Gas  
My commission expires MARCH 24, 2003



RECEIVED  
WV Division of  
Environmental Protection